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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/734,953 | 12/11/2000 | Bruce M. Schena | IMM1P034A | 6372 |

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EXAMINER

BRIER, JEFFERY A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2672

DATE MAILED: 07/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TR

Office Action Summary

Application No.

09/734,953

Applicant(s)

SCHENA ET AL.

Examiner

Jeffery A. Brier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2002 and 10 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39,40,42-44,49,50,52-54 and 61-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 63 and 66 is/are allowed.
- 6) ☒ Claim(s) 39,40,42-44,49,50,52-54,61,62,64 and 65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). 11.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7. 6) ☐ Other: _____

DETAILED ACTION

1. The examiner thanks Paul Thyfault for the telephone interview held on 06/07/2002 and 06/10/2002 and for the supplemental amendment filed on 06/10/2002. During the interview the examiner indicated that this application would be allowable if the changes discussed during the interview were made. The 06/10/2002 represents the agreed upon changes. Regretfully other issues were discovered subsequent to the 06/10/2002 amendment which prevents issuance of the application as a patent. As will be developed below the specification does not support independent claims 42 and 52 and their dependent claims.
2. The application has been amended as follows: the continuing data on page 1 has been amended by the examiner by changing "Application No. 08/965,720 filed on November 7, 1997," to "Application No. 08/965,720, now Patent No. 6,166,723, filed on November 7, 1997,".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 39, 40, 42-44, 49, 50, 52-54, 61, 62, 64 and 65 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed

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invention. Independent claims 42 and 52 both claim *wherein said force feedback sensation is a resistive spring force resisting motion of said cursor into said icon*. The specification at page 14 lines 11-19 describes:

In a "pressure clicking" or "click surface" embodiment, if the cursor is moved against the border of an icon and the force functionality mode is active, a force will be output resisting motion of the cursor into the icon; when the mouse moves against the force to a threshold distance, the icon is selected as if the cursor had clicked or double-clicked on the icon. Such an embodiment is described in co-pending patent application Ser. No. 08/879,296, entitled "Graphical Click Surfaces for Force Feedback Applications", by Rosenberg et al., filed Jun. 18, 1997, incorporated by reference herein. In other embodiments, other input devices besides or in addition to button 15a can control the force functionality mode.

The specification did not describe the type of force that resists motion of the cursor into the icon. On page 14 line 16 co-pending patent application 08/879,296 was incorporated by reference which is now U.S. Patent No. 6,078,308. Column 26 line 46 to column 27 line 26 of U.S. Patent No. 6,078,308 is the part of this patent which most closely supports these claims, however, they do not fully support these claims because this patent does not state wherein said force feedback sensation is a resistive spring force resisting motion of said cursor into said icon.

FIG. 8 is diagrammatic illustration showing an alternate embodiment 410 of static selection surface 400 in which the mapping between cursor 306 and the position of the user object 12 is not broken. After the initial contact between cursor 306 and surface 410, the user moves the user object 12 in a direction shown by arrow 412. The current position of the user object 12 is shown by dashed line X. The cursor 306 is also displayed at dashed line X, since the cursor 306 continues to be displayed at the position of the user object

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12 in this embodiment. The surface 410, however, remains at the original position X_o . The force F is output on the user object during this movement as described in the embodiment of FIG. 7. When the user object 12 and cursor 306 reach trigger position X_T , the button state changes (or the object 402 is selected, see below) as described above. Again, the user preferably feels a force spike or other cue on the user object 12 at the trigger position X_T to indicate the change in state.

The embodiment of FIG. 8 can be used to provide the user with visual feedback as to the actual position of the user object 12 with respect to the surface 410 and graphical object 402. This embodiment might be used where graphical object 402 is an icon or similar object in a GUI 300.

Normally, when the user selects an icon in a non-force-feedback GUI, the cursor 306 is guided over the icon at which point the user presses a physical button to select the icon or a function. The embodiment of FIG. 8 is similar to such a case, where cursor 306 is displayed over the object 402 but the user manipulates the spring force of the force feedback to select the icon instead of pressing a physical button. Such an embodiment is well suited to an object 402 having selection surfaces 410 provided on all displayed sides of the object, thus allowing a user to conveniently select the selection surface when approaching the object with the cursor from any direction.

In addition, for either of the embodiments of FIGS. 7 and 8, a static selection surface 400 or 410 may be invisible to the user and displayed, for example, a predetermined distance away from the displayed borders of the graphical object 402. For example, the force F may be output on the user object when the cursor 306 first encounters the invisible click surface. If the user object 12 continues to be moved toward the object 402, a trigger position X_T will eventually be reached, as described above, which will select the graphical object or change the state of a graphical button. The displayed border of the graphical object can be provided as a visible trigger position X_T in such an embodiment, if desired.

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Thus, applicants originally filed specification does not support independent claims 42 and 52 as well as dependent claims 39, 40, 43, 44, 49, 50, 53, 54, 61, 62, 64 and 65.

Allowable Subject Matter

5. Claims 63 and 66 are allowed.

The prior art of record does not teach or suggest an indexing button on the force feedback interface device enabling an indexing mode. This is described in applicants specification at page 12 line 33 to page 13 line 12.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jeffery A Brier
Primary Examiner
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